IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	William L. Brenneman, et al.	Docket:	102426-200
Serial No.:	10/727,920	Art Unit:	1775
Filed:	December 4, 2003	Examiner:	Lam, Cathy Fong Fong
Assignee:	Olin Corporation	Conf. No.	6952
Title:	PEEL STRENGTH ENHANCEMENT OF COPPER LAMINATES		

Certificate of Mailing

Date of Deposit: 11/18/2005

I hereby certify under 37 CFR 1.8(a) that this correspondence (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated above and is addressed to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signed: Elizabeth A Galletta

Name: Elizabeth A Galletta

AFFIDAVIT UNDER 37 C.F.R. 1.132

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

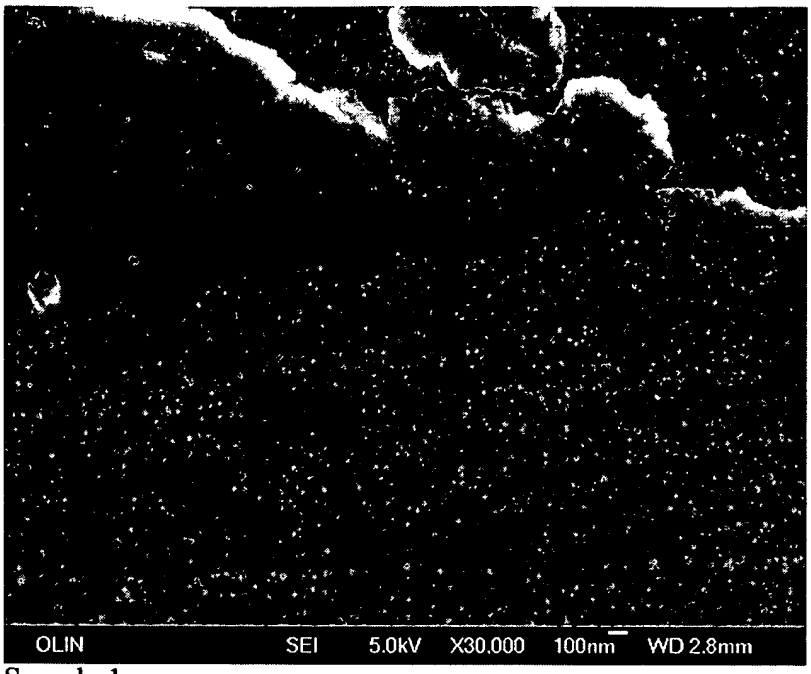
Your Affiant, William L. Brenneman, states as follows:

1. I received a Bachelor of Science Degree in Metallurgical Engineering from Drexel University in June 2, 1973. I received a Masters of Science Degree in Materials Engineering from Drexel University in June 2, 1973. I also received a Ph.D. Degree from Drexel University in May 29, 1976. Since March 1, 1976 I have been employed by Olin Corporation in various capacities with increasing responsibilities within the Research and Development Department. Since July of 2003 I have been

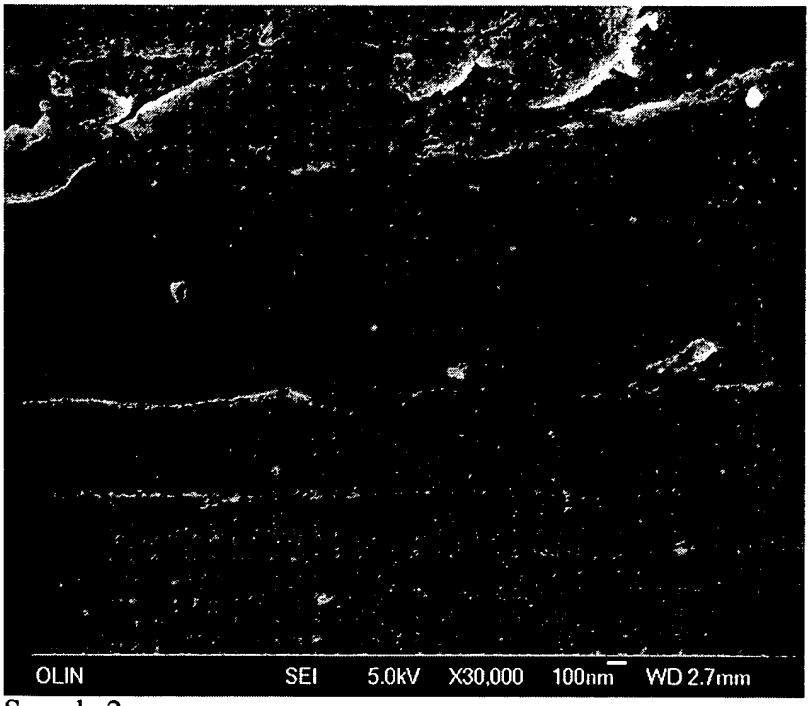
employed as a Consulting Scientist by Olin Corporation (Olin) at the Metals Research Laboratory, in Waterbury, Connecticut.

2. Through my present job, I have been apprised by both internal marketing personnel and external customers that for a copper foil to be commercially successful, the copper foil must have an improved combination of properties. An improvement in only one property, or even two properties, is not likely to motivate consumers to change the copper foil they specify.
3. I am one of the inventors of the copper foil claimed in United States Patent Application Serial Number 10/727,920 entitled "Peel Strength Enhancement of Copper Laminates" by William L. Brenneman, Andrew J. Vacco and Szuchain F. Chen that was filed on December 4, 2003.
4. Having established a level of expertise at least commensurate with one skilled in the metallurgical arts, I believe that I am competent to comment on technical aspects of United States Patent Application Serial Number 10/727,920.
5. I have reviewed the claims pending in United States Patent Application Serial Number 10/727,920. In particular, I have reviewed the claims following an amendment being submitted at the same time as this Affidavit. I believe I am qualified to comment on the invention embodied in those claims.
6. At the request of Elizabeth A. Galletta, Olin's patent attorney, I reviewed U.S. Patent No. 5,071,520, entitled "Method of Treating Metal Foil to Improve Peel Strength". Based on my expertise as established above, I believe that I am competent to comment on the technical aspects of the U.S. Patent and to evaluate copper foils processed in accordance with that U.S. Patent.

7. At the request of Ms. Galletta, a wrought copper foil sample was subjected to the antitarnish treatment disclosed in Example A of U.S. Patent No. 5,071,520 (hereinafter referred to as "the '520 foil"). The wrought copper foil was not subjected to a dendritic treatment. The '520 foil was prepared for comparison against a copper foil disclosed in U.S. Patent Application Serial Number 10/727,920 (hereinafter referred to as "the '920 foil").
8. The '520 foil was given an antitarnish treatment in a CrO_3/H_3PO_4 solution having a concentration of 0.2 g/l CrO_3 and 0.5 g/l H_3PO_4.
9. The '520 foil was treated at 53°C for 30 seconds and was followed by a rinse in an aqueous solution containing 50 ppm $Ca(OH)_2$ at 50°C for 30 seconds. A photograph of the resulting treated copper foil is referred hereinafter as "Sample 1".
10. Further, at the request of Ms. Galletta, I had a specimen of wrought copper foil made as disclosed in sample 5 of United States Patent Application Serial Number 10/727,920 ("the '920 foil"). The '920 foil was compared to the '520 foil.
11. The '920 foil was treated in a solution containing 15 g/l sodium dichromate and 20 g/l sodium sulfate in di-ionized water at 37°C for 5 seconds. The copper foil was then rinsed in di-ionized water. A photograph of the resulting treated copper foil is referred hereinafter as "Sample 2".
12. A scanning electron microscope photograph was taken at 30,000X of both Sample 1 and Sample 2, both of which are included below.



Sample 1



Sample 2

13. The photograph of Sample 1 contains small light dots, while the small light dots are lacking in the photograph of Sample 2.

14. Based on my experience in metallurgy, the small light dots present in the photograph of Sample 1 indicate that the surface of Sample 1 has a different morphology than the surface of Sample 2. It is my belief that the small light dots are bumps.

15. Based on the foregoing, I do not believe that one skilled in the art having possession of the information contained within U.S. Patent No. 5,071,520 would manufacture a copper foil presented in claim 1 of our patent application, United States Patent Application Serial Number 10/727,920. In particular, I do not believe that the information contained in U.S. Patent No. 5,071,520 teaches or suggests a smooth copper foil having a peel strength enhancement coating deposited onto the surface of the copper foil to be laminated to a dielectric substance.

16. In my opinion, the copper foil and peel strength enhancement coating disclosed and claimed in our patent application, United States Patent Application Serial Number 10/727,920, is not inherently disclosed or suggested by the copper foil and surface treatment described in U.S. Patent No. 5,071,520.

17. In my opinion, the differences between the copper foil claimed in United States Patent Application Serial Number 10/727,920 and the copper foil disclosed in U.S. Patent No. 5,071,520 are unexpected, unobvious and significant.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,
William L. Brenneman

Date: 11/16/05

William L. Brenneman

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